



# UNITED STATES PATENT AND TRADEMARK OFFICE

50  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,720	05/23/2001	Eric W. Nielsen	00-357	1496

7590 07/13/2005

W. Bryan McPherson III  
Caterpillar Inc.  
Intellectual Property Department, AB6490  
100 N.E. Adams Street  
Peoria, IL 61629-6490

EXAMINER

KE, PENG

ART UNIT	PAPER NUMBER
----------	--------------

2174

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/863,720

Applicant(s)

NIELSEN ET AL.

Examiner

Peng Ke

Art Unit

2174

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This action is responsive to communications: Amendment, filed on 4/15/05.

This action is final.

Claims 1-24 are pending in this application. Claims 1, 18, and 22 are independent claims. In the Amendment, filed on 4/15/05, claim 1 was amended.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4, 6-11, 13, 15-24 rejected under 35 U.S.C. 102(e) as being anticipated by Zuffante et al. U.S. Patent No. 6,219,049.

As per claim 1, Zuffante et al. teaches a method of presenting a graphical user interface for a finite element analysis application on an electronic display device, comprising:

launching a parent graphics window on said electronic display device for displaying an image; (column 5, lines 16-36; item 42 is the parent window that displays a three dimensional of a device) and

attaching a property input window to said parent graphics window for displaying and manipulating settings and attributes of an entity selected within said parent graphics window,

wherein a first interface element of said property input window includes at least one of an interval count field indicative of a number of mesh entities that will fill said selected entity, an interval size field indicative of a size of said mesh entities that will fill said selected entity, (column 7, lines 46-column 8, lines 24; The pop window allows the user to modify the size of the object) an interval set field indicative of a circumstance under which said interval fields may be modified, (column 21, line 36-column 22, lines 13; The system's determination of the characteristic geometry for mating indicates the circumstance under which the object can be modified) a mesh scheme field indicative of a desired mesh scheme and a smooth scheme field indicative of a process of improving said an element quality after a mesh generation. (column 19, lines 30-50)

As per claim 2, Zuffante et al. teaches the method of claim 1 further comprising attaching a task window to said parent graphics window for geometry creation, manipulation, and meshing of said entity within said parent graphics window, wherein a first interface element of said task window having a first tab identifier includes at least one of a first iconic button, adapted to providing creation capabilities of at least one of a vertex entity and curve entity and surface entity and volume entity and brick entity and sphere entity. (Figure 12, item 106) and

cylinder entity and pyramid entity and torus entity and frustum entity, and a second iconic button adapted to providing modification capabilities of entities by at least one of webcutting and imprinting and cleaning and combining and boolean operations and healing and positioning and scaling and separating and splitting and copying and merging and tweaking. (Figure 5, item 76)

As per claim 4, Zuffante et al. teaches the method of claim 1 further comprising attaching an entity tree window to said parent graphics window for displaying a graphical hierarchical representation of the parent child relationship of said entity selected within said graphics window or said entity tree window, wherein first interface element of said entity tree window includes parent and child entity names/IDs, ID icons, and mesh status check boxes. (figure 9, item 88, and item 90)

As per claim 6, Zuffante et al. teaches the method of claim 2 wherein said task window includes an advanced selection dialogue interface for selection of said entity in said graphics window that is particularly difficult to select yet is required for finite element analysis application execution and wherein said advanced selection dialogue interface includes a list box for displaying a current list of at least one said entity available for a particular FEA application command, and a required-entity field for displaying the number and type of said entity required for said finite element analysis application execution. (figure 12, item 106)

As per claim 7, Zuffante et al. teaches the method of claim 2 further comprising outputting a filter picking dialog interface window from said task window for filtering entities to parse out entities that match or do not match said entity characteristics, wherein said filter picking dialog interface window includes a filter-criteria field for including or excluding filtered entities and performing specified actions on said including or excluding filtered entities, and a register list box for listing at least one registered filter for limiting subsequent selection operations in said graphics window to those that meet said filter criteria. (column 20, lines 54- column 21, lines 44)

As per claim 8, Zuffante et al. teaches the method of claim 7 wherein said registered filter is deactivated, so as to not limit said subsequent selection operations in said graphics window, while remaining a registered filter in said filter picking dialog interface window. (column 20, lines 54-column 21, lines 44)

As per claim 9, Zuffante et al. teaches a computer-readable medium having computer-executable instructions for performing the steps recited in claim 1. (figure 1, items 31-34)

As per claim 10, it is rejected with the same rationale as claim 1. Supra.

As per claims 11, 13, and 15-17 they are of the same scope as claim 1, 4, and 6-8. Supra.

As per claim 18, Zuffante et al. teaches a method of presenting a graphical user interface tabbed-based menuing system on an electronic display device, comprising:

launching a parent window on said electronic display device for displaying an image;  
(column 5, lines 16-36; Item 42 is the parent window.) and

attaching a child window to said parent window wherein said child window includes a first interface element having a first tab identifier and at least one iconic button wherein selection of said at least one iconic button associated with said first interface element outputs a second interface element having a second tab identifier wherein said second interface element overlaps said first interface element except for said first tab identifier. (column 19, lines 30-50; When item 402 and item 400 are placed together, item 402 overlaps the surface of the item 400)

As per claim 19, Zuffante et al. teaches the method of claim 18, further comprising alternating between said first interface element and said second interface element by selecting

Art Unit: 2174

said first tab identifier and said second tab identifier, respectively. (column 18, lines 41-column 19, lines 50)

As per claim 20, Zuffante et al. teaches the method of claim 18, wherein said first tab identifier and said second tab identifier are oriented at bottom of said first interface element and said second interface element, respectively. (column 20, lines 54-column 21, lines 44)

As per claim 21, which is dependent on claim 18, it is of the same scope as claim 9. Supra.

As per claim 22, it is rejected with the same rationale as claim 18. Supra.

As per claims 23 and 24, they are of the same scope as claim 19 and 20. Supra.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zuffante et al. U.S. Patent No. 6,219,049 in view of Jordan et al. U.S. Patent No. 5,745,113.

As per claim 3, Zuffante et al. teaches the method of claim 1. However, Zuffante fails to teach the device comprises attaching a textual input window to said parent graphics window wherein first interface element of said textual input window includes a command line for entry of textual commands for said finite element analysis application execution.

Jordan teaches a device comprises attaching a textual input window to said parent graphics window wherein first interface element of said textual input window includes a command line for entry of textual commands for said finite element analysis application execution. (figure 2. item text)

It would have been obvious to an artisan at the time of the invention to include Jordan's teaching with method of Zuffante to allow user to enter command in text.

As per claim 5, Zuffante et al. teaches the method of claim 1. However Zuffante fails to teach the device comprising attaching a textual output window to said parent graphics window wherein first interface element of said textual output window includes an output line having textual feedback of activity executed by said finite element analysis application.

Jordan teaches a device comprising attaching a textual output window to said parent graphics window wherein first interface element of said textual output window includes an output line having textual feedback of activity executed by said finite element analysis application. (column 12, lines 1-25)

It would have been obvious to an artisan at the time of the invention to include Jordan's teaching with method of Zuffante to allow user to review input history.



Art Unit: 2174

As per claims 12 and 14, they are of the same scope as claims 3 and 5. Supra.

**Response to Argument**

Applicant's arguments with respect to claims 1-24 have been considered but are deemed to be moot in view of the new grounds of rejection.

*Kristine Kincaid*  
KRISTINE KINCAID  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peng Ke whose telephone number is (571) 272-4062. The examiner can normally be reached on M-Th and Alternate Fridays 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peng Ke